

Expanding Visions: 1950s Applications and Extensions of Skinner's Operant Psychology

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Although the success of competing paradigms is often thought to be a function of their theoretical characteristics and effectiveness in understanding and predicting phenomena, their applicability to a range of diverse, and often practical, situations can be at least as important. As an instance of this process at work, the following three papers represent case studies aimed at revealing some of the dynamics of the spread of operant psychology during the 1950s, as it moved from studies of rats and pigeons in the laboratory to new situations. The broad applicability of the approach was a major reason for its later success. These papers are based on those presented in a symposium during the 2002 convention of the American Psychological Association in Chicago under the joint auspices of Divisions 25 (Behavior Analysis) and 26 (History of Psychology).

Behavior analysis began with B. F. Skinner's work of the 1930s, which culminated in the publication of *The Behavior of Organisms* (Skinner, 1938). This work dealt almost exclusively with bar pressing by rats in boxes, with virtually no extrapolation to broader contexts. Eventually, the approach was applied in work with programmed instruction, behavior modification, the training of animals in zoos and marine parks, animal psychophysics, and the space program.

Skinner formed ideas of a wider range of application early on, and it was not long before he began to branch out. Among the highlights of his ex-

tensions are his controversial article on the air crib entitled "Baby in a Box" in the *Ladies Home Journal* (Skinner, 1945) and Skinner's (1948) utopian novel, *Walden Two*. Keller and Schoenfeld developed their operant-based curriculum at Columbia University; their classic *Principles of Psychology* appeared in 1950 and included a chapter on social behavior. The beginning of Skinner's work on teaching machines can be documented to have been with his 1953 visit to his daughter's fourth-grade class (Benjamin, 1988; Skinner, 1984). In his popular *Science and Human Behavior* (1953), Skinner extended his analyses to emotion, self-control, thinking, private events, the self, social behavior, personal control, group control, government and law, religion, psychotherapy, economic control, education, and culture. Skinner's *Verbal Behavior* appeared in 1957; "Pigeons in a Pelican" (1960) appeared 3 years later.

This expansion of behavior analysis into a wide range of applications provides the subject matter for this set of papers. Our hope is that these case studies will illuminate the processes involved as behavior analysis moved from the study of rats in Skinner boxes to an approach that has been applied widely.

The first article is by Victor G. Laties, Professor Emeritus of Environmental Medicine at the University of Rochester, who is known and respected as a leading student of behavioral pharmacology. In his article on "Behavior Analysis and the Growth of Behavioral Pharmacology," he documents the "invasion" of behavior analysis into pharmacology. He discusses a number of programs, including Peter B. Dews'

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work on the actions of common central nervous system drugs on reinforcement schedules and Joseph V. Brady's important application of operant techniques to physiological questions. Latties traces the growth of representation of behavior-analytic studies in the *Journal of Pharmacology and Experimental Therapeutics* that began during the 1950s.

I wrote the second article. After spending most of my career as a comparative psychologist, I have been active for the last decade or so in the field of the history of psychology. In my article entitled "Conflicting Approaches: Operant Psychology Arrives at a Primate Laboratory," I review the experiences of three behavior analysts, Charles Ferster, Roger Kelleher, and John Falk, as they conducted research at the Yerkes Laboratories of Primate Biology between 1955 and 1957. I document the level of resistance shown by psychologists favoring more traditional approaches and show that the spread of behavior analysis was not always a smooth one.

The third article is by Alexandra Rutherford, a historian of psychology on the faculty of York University in Toronto who earlier wrote a doctoral dissertation entitled "Between the Science of Behavior and the Art of Living: B. F. Skinner and Psychology's Public in Mid-Twentieth Century America." In her article on "Skinner Boxes for Psychotics: Operant Conditioning at Metropolitan State Hospital," she reviews the first systematic application of the free-operant approach to adult human behavior undertaken by Skinner and Ogden Lindsley at the Laboratory for Behavior Research at Metropolitan State Hospital in Waltham, Massachusetts, in the ear-

ly 1950s. She shows how this research provided a transition between Skinner's research with nonhuman animals and the field of applied behavior analysis.

The discussant for the section is Edward K. Morris, Professor of Human Development and Family Life at the University of Kansas. His research interests lie in the experimental analysis of behavior (both human and nonhuman), conceptual analysis in the history and philosophy of science, psychology, behavior analysis, contextualism, and interbehavioral psychology. It should be noted that the other three authors benefited from Morris' comments and suggestions made at the symposium. As a result, our articles were improved, but his task of providing a new discussion was made more difficult.

We hope that this special section sheds light on some of the events that occurred as the range of application of behavior analysis was expanded during the 1950s.

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